

**Translation**

INTERNATIONAL COOPERATION TREATY

PCT/JP2003/001768



**PCT**

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

20 AUG 2004

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FP-8278PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/001768	International filing date (day/month/year) 19 February 2003 (19.02.2003)	Priority date (day/month/year) 22 February 2002 (22.02.2002)
International Patent Classification (IPC) or national classification and IPC D01F 6/92		
Applicant KANEKA CORPORATION		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 31 July 2003 (31.07.2003)	Date of completion of this report 06 May 2004 (06.05.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

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## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-16	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-16	NO
Industrial applicability (IA)	Claims		YES
	Claims	1-16	NO

### 2. Citations and explanations

#### Documents

Document 1: JP 61-245309 A (Unitika Ltd.), 31 October 1986

Document 2: JP 10-219519 A (Toray Industries, Inc.), 18 August 1998

Document 3: US 4127590 A (Toyo Boseki K.K.), 28 November 1978

#### Claim 1

Document 1 discloses an invention of a polyester fiber comprising a polyalkylene terephthalate, a polyarylate, and a phosphite compound, and indicates that the fiber can contain various additives such as a flame retardant or a colorant (page 3, line 16).

Document 1 does not disclose the "polymer alloy (B) comprising a polyalkylene terephthalate and a polyarylate" described in the present application, but according to the description, the polyalkylene terephthalate of (B) is the same as the polyalkylene terephthalate of (A), and it is dry-blended with other constituents such as a polyarylate and a phosphite compound, and then melt-kneaded and spun. Here, the polyalkylene terephthalate does not undergo a change in its chemical structure as a result of going through a stage in which it is combined in a polymer alloy

with a polyarylate, and once the stage of the manufactured product of a fiber has been reached, it is impossible to determine whether the polyalkylene terephthalate derives from (A) or (B). Therefore, regardless of whether the particular manufacturing process is disclosed or not, the polyalkylene terephthalate at the fiber stage cannot be distinguished from the invention disclosed in document 1.

The invention of the present application and the invention of document 1 differ in that document 1 does not indicate that the flame retardant of the invention disclosed therein is a phosphorous compound flame retardant, but various types of phosphorous compound flame retardants are conventionally used as flame retardants in polyester fibers, and thus, a person skilled in the art could easily conceive of selecting such a flame retardant from among known flame retardants in order to achieve a desired level of flame retardance.

Claims 3, 4, and 9

The polyalkylene terephthalate, polyarylate, and phosphite compounds listed in claims 3, 4, and 9 are constituents disclosed in document 1.

Claims 5 and 6

Phosphorous compound flame retardants are disclosed in document 2.

Claims 7 and 8

Reactive phosphorous compound flame retardants are disclosed in document 3.

Claims 10 to 12

Fine organic and inorganic particles are conventionally used as matting agents and various other types of additives.

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Claims 13 and 14

The invention disclosed in document 1 is also a non-crimped raw yarn. Further, a feature wherein a colorant can be added is disclosed in the passage indicated above.

Claims 15 and 16

The invention described in claims 15 and 16 is still a polyester fiber, and the question of whether a strand is an artificial hair at the time of manufacture or when distributed for sale is not an objectively distinguishing feature of the strand.

Therefore, the inventions described in claims 1 to 16 do not involve an inventive step.